



forestry, fisheries & the environment

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Forestry, Fisheries and the Environment
REPUBLIC OF SOUTH AFRICA

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Dear Mr Viljoen

DECISION ON APPLICATION FOR A LOAD-BASED EMISSION LIMIT FOR SULPHUR DIOXIDE (SO₂) IN TERMS OF PARAGRAPH 12A OF THE MINIMUM EMISSION STANDARDS (MES) OF 22 NOVEMBER 2013 AS AMENDED, PUBLISHED IN TERMS OF SECTION 21 OF THE NATIONAL ENVIRONMENTAL MANAGEMENT: AIR QUALITY ACT 39 OF 2004 FOR SASOL SOUTH AFRICA LIMITED (SECUNDA SYNFUEL OPERATIONS)

1. In terms of section 21 of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) (NEMAQA), Sasol South Africa Limited (Sasol) is required to meet the Minimum Emission Standards (MES) contained in the List of Activities which Result in Atmospheric Emissions which have or may have a Significant Detrimental Effect on the Environment, Including Health, Social Conditions, Economic Conditions, Ecological Conditions or Cultural Heritage Published in Government Notice No. 893 of 2013 (the Section 21 Notice) within the timeframes specified in the notice.
2. On 23 February 2015, Sasol Secunda was granted a 10-year postponement from meeting new plant standard for sulphur dioxide (SO₂), in respect of boilers in the steam plants until 31 March 2025.
3. Sasol Secunda lodged a second application for postponement of new plant standards compliance timeframes in March 2019 for the steam plants among others, for two pollutants (particulate matter and oxides of nitrogen). A positive decision was granted for postponement of compliance with new plant standards from 1 April 2020 to 31 March 2025 on 20 November 2019.



POSTPONEMENT OF COMPLIANCE TIMEFRAMES FOR A LOAD-BASED EMISSION LIMIT FOR SULPHUR DIOXIDE (SO₂) IN TERMS OF CLAUSE 12A OF THE MINIMUM EMISSION STANDARDS (MES) OF 22 NOVEMBER 2013 AS AMENDED, PUBLISHED IN TERMS OF SECTION 21 OF THE NATIONAL ENVIRONMENTAL MANAGEMENT: AIR QUALITY ACT 39 OF 2004 FOR SASOL SOUTH AFRICA PTY LIMITED (SECUNDA SYNFUELS OPERATIONS)

4. On 19 January 2022, Sasol Secunda was granted condonation by Minister in terms of section 47C of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA), to apply for an alternative emission limit in terms of paragraph (12A) of the Section 21 Notice after the 31 March 2019 deadline. A condition of the condonation decision was that Sasol's application must be accompanied by such information as stipulated in paragraph (12A) of the Section 21 Notice, read with paragraph 5.4.3.4 of the National Framework for Air Quality Management in the Republic of South Africa.
5. On 29 June 2022, Sasol applied to the National Air Quality Officer (NAQO) and Nkangala District Authority in terms of paragraph (12A) of the Section 21 Notice for an alternative emission for sulphur dioxide, for the boilers in its steam plants at Sasol Secunda (the Application). These boilers are currently operating in terms of a postponement as detailed above.
6. In its Application, Sasol Secunda requested, *inter alia*, the following:
 - 6.1 to be regulated by load-based emission limits for SO₂ in terms of paragraph (12A) of the Section 21 Notice - the mass and the rate of the pollutant emissions (per cubic meter of air emitted instead of a concentration limit as provided for by the MES as of 1 April 2025 when the current postponement comes to an end; and
 - 6.2 to reduce the mass of SO₂ emitted during a day rather than the amount of SO₂ emitted per normal cubic meter of air.
 - 6.3 Sasol Secunda presented that the implementation of an integrated air quality and greenhouse gases (GHG) reduction roadmap would enable Sasol to reduce SO₂ by 23 tons per day prior to 1 April 2025 and that this would amount to a 4% load reduction on SO₂ to be achieved by 1 April 2025, with the bulk intended to be achieved by 2030 (30% in total).
7. The NAQO, together with Gert Sibande District Municipality noted the reasons that informed the Application which include, *inter alia*, the following:
 - 7.1 In Sasol Secunda's view the optimal sulphur dioxide reduction solution is therefore to reduce its atmospheric emissions by reducing boiler operations based on compliance with load-based limits. Reducing boiler operations would mean reduced coal use together with reductions in all emissions associated with coal use, including sulphur dioxide and greenhouse gas emissions.
 - 7.2 Sasol Secunda concluded that in its view the implementation of the integrated air quality and GHG reduction roadmap, involving the turning down of boilers not only to reduce SO₂ emissions but with additional benefits intended to be realised from 2025 onwards, is the best approach towards ambient air quality improvement without causing other significant environmental impacts while trying to reduce SO₂ emissions. It indicated that it cannot adopt coal beneficiation as a compliance solution for SO₂ emissions from the boilers at the steam plants as previously thought.

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- 7.3 In terms of paragraph (12A)(c) of the Section 21 Notice, Sasol Secunda submitted that there is material compliance with the national ambient air quality standards (NAAQS) in the area for the pollutant applied for (i.e. SO₂).
8. The following provisions of the Section 21 Notice are relevant to the Application and the resultant decision:
- (10) *Existing plant must comply with minimum emission standards for new plant as contained in Part 3 by 01 April 2020, unless where specified.*
 - (11A) *An existing plant may apply to the National Air Quality Officer for a once-off postponement with the compliance timeframes for minimum emission standards for new plant as contemplated in paragraph (10). A once-off postponement with the compliance timeframes for minimum emission standards for new plant may not exceed a period of 5 years from the date of issue. No once-off postponement with the compliance timeframes with minimum emission standards for new plant will be valid beyond 31 March 2025.*
 - (12) *The application contemplated in paragraph (11A) and (11B) must include—*
 - (a) *An air pollution impact assessment compiled in accordance with the regulations prescribing the format of an Atmospheric Impact Report (as contemplated in Section 30 of the Act), by a person registered as a professional engineer or as a professional natural scientist in the appropriate category;*
 - (b) *a detailed justification and reasons for the application; and*
 - (c) *a concluded public participation process undertaken as specified in the National Environmental Management Act and the Environmental Impact Assessment Regulations made under section 24(5) the aforementioned Act.*
 - 12(A) *An existing plant may submit an application regarding a new plant standard to the National Air Quality Officer for consideration if the plant is in compliance with other emission standards but cannot comply with a particular pollutant or pollutants.*
 - (a) *An application must demonstrate a previous reduction in emissions of the said pollutant or pollutants, measures and direct investments implemented towards compliance with the relevant new plant standards.*
 - (b) *The National Air Quality Officer, after consultation with the Licensing Authority, may grant an alternative emission limit or emission load if:*
 - (i) *there is material compliance with the national ambient air quality standards in the area for pollutant or pollutants applied for; or*
 - (ii) *the Atmospheric Impact Report does not show a material increased health risk where there is no ambient air quality standard.*
 - (13) *The National Air Quality Officer, with the concurrence of the Licensing Authority as contemplated in section 36 of this Act, may in respect of an application for a once-off postponement with compliance timeframes with minimum emission standards for new plant as contemplated in paragraph (11A), or a once-off suspension of compliance timeframes with minimum emission standards for new plant as contemplated in paragraph (11B):*
 - (a) *grant the application with or without conditions; or*
 - (b) *refuse the application with written reasons*

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9. The NAQO and Gert Sibande District Municipality further noted, *inter alia*, the following from the Application, application motivation, atmospheric impacts and public participation reports:
 - 9.1 Two postponements have been granted in respect of the steam plants at Sasol Secunda; one being a new plant standard postponement for SO₂ issued on 23 February 2015 and the other being a new plant standard postponement for particulate matter and oxides of nitrogen issued on 20 November 2019. Accordingly, the steam plants are currently not in compliance with the new plant standards for sulphur dioxide, particulate matter and oxides of nitrogen.
 - 9.2 Sasol Secunda has investigated technology and conducted feasibility studies on various abatement technologies and has demonstrated reductions in particulate matter and sulphur dioxide emissions from anthropogenic sources through the offset projects.
 - 9.3 Sasol Secunda's commitment to air quality compliance as well as long-term ambitions to transform its operations to lower carbon options to meet greenhouse gas reduction targets towards net zero by 2050 and to reduce its overall environmental footprint.
 - 9.4 Ambient monitoring data from the Highveld Priority Area shows non-compliances with the sulphur dioxide and particulate matter national ambient air quality standards.
10. In terms of Section 21 Notice Paragraph (13), with concurrence of the Gert Sibande District Municipality, the application for an alternative limit is refused as detailed below.

Table A: Sasol Secunda Operations application for postponement decision

S21 Category and appliances	Postponement Sought	Proposed Emission Limit	Emission Standards			Decision
			Minimum Standards (mg/Nm ³)			
			Pollutant	2015	2020	
Subcategory 1.1: Solid Fuel Combustion Installations Steam Plant Point sources: Main Stack West (Unit 43) & Main Stack East (Unit 243)	1 April 2025 – 31 March 2030 1 April 2030 – onwards	503 t/d 365 t/d	SO ₂	3500	1000	Alternative sulphur dioxide limit for steam plants in terms of paragraph 12A is refused. The requirement to comply with the minimum emission standards of 1000 mg/Nm ³ for new plant from 01 April 2025 remains in place.


* All minimum emission standards are expressed on a daily average basis, under normal conditions of 273 Kelvin, 10% oxygen and 101.3 kPa.

11. Sasol Secunda application is refused for, *inter alia*, the following reasons:
 - 11.1 For an application in terms of paragraph (12A) to be considered, the plant must, in terms of paragraph (12A)(a), be in compliance with other emission standards. Sasol Secunda steam plants are not compliant as they are currently operating in terms of a postponement for particulate matter and oxides of nitrogen. Accordingly, the application falls to be refused on this basis alone.

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- 11.2 Paragraph (12A)(b) requires the applicant to demonstrate previous reduction, measures and direct investments implemented towards compliance. Sasol Secunda has failed to demonstrate steam plants previous reduction, measures and direct investments implemented towards compliance with sulphur dioxide. The application falls to be set aside for this reason alone.
- 11.3 Paragraph (12A)(c)(i) of the Section 21 Notice states that for a favourable decision in terms of paragraph (12A) to be taken there must be material compliance for sulphur dioxide with the national ambient air quality standards in the affected ambient atmosphere. As you are aware, Sasol Secunda operations are located within the Highveld Priority Area, an area wherein the national ambient air quality standards for sulphur dioxide and particulate matter are frequently exceeded. Accordingly, there is no material compliance with the national ambient air quality standards in Secunda and for this reason alone, Sasol Secunda's application is refused.
- 11.4 It is noted from Sasol Secunda's letter dated 6 April 2023 that the load-based emission limit is required only from 1 April 2025 when the current postponement for sulphur dioxide lapses. In this regard, be advised that it is the department's view that to consider any deviation from the MES, including by an alternative emission limit, after the 31 March 2025 compliance deadline, would be contrary to the purpose of the Section 21 Notice and the empowering legislation. To grant such indulgence would, in effect, enable a deviation from compliance timeframes into perpetuity. This would be contrary to the mechanisms provided for in the Section 21 Notice, to progressively bring all emitters into compliance with the MES by 2025.
- 11.5 In addition, the NAQO is not empowered to grant an application for an alternative limit where a once-off postponement has already been granted. The use of the word "once-off" in paragraph (11A) of the Section 21 Notice envisages an applicant only being granted an indulgence of this sort once. Indeed, to permit such indulgence into perpetuity would defeat the objective of NEMAQA.
12. The decision and reasons contained in this communication were originally presented to Sasol Secunda at a meeting which took place on 17 May 2023.
13. The conditions stipulated in the NAQO decision of 20 November 2019 still apply.
14. Thank you for your co-operation in matters regarding your application.

Yours sincerely,



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DR. PATIENCE GWAZE
DEPARTMENT OF FORESTRY, FISHERIES AND THE ENVIRONMENT
DESIGNATION: NATIONAL AIR QUALITY OFFICER
DATE: 11 JULY 2023